

## ABSTRACT OF THE DISCLOSURE

The improved apparatus for treatment of a waste gas containing fluorine-containing compounds comprises solids treating means 1 for separating the solids from a waste gas containing fluorine-containing compounds, addition means for adding  $H_2$  and/or  $H_2O$  or  $H_2$  and/or  $H_2O$  and  $O_2$  as a decomposition assist gas to the waste gas leaving the solids treating means, thermal decomposing means 3 that is packed with  $\gamma$ -alumina 2 heated at  $600 - 900^\circ C$  and which thermally decomposes the waste gas to which the decomposition assist gas has been added, acidic gas treating means 5 for removing acidic gases from the thermally decomposed waste gas, and channels for connecting these means in sequence. The apparatus preferably includes air ejector 7 capable of adjusting its internal pressure.